STORY COUNTY CONSERVATION

Tedesco Environmental Learning Corridor

MASTER PLAN OPEN HOUSE

SHIVEHATTERY ARCHITECTURE + ENGINEERING

WRT

E RESOURCES GROUP EVALUATION • EDUCATION • ENVIRONMENT • ENERGY

earthview environmental

GREATecology ENVIRONMENT + DESIGN

Agenda

- 1. Site History
- 2. Proposed Improvements
- 3. Interpretive Aspects
- 4. Stream Restoration & Habitat Enhancement
- 5. Project Timeline
- 6. Questions

Site History

Judy Joyce, Earthview Environmental

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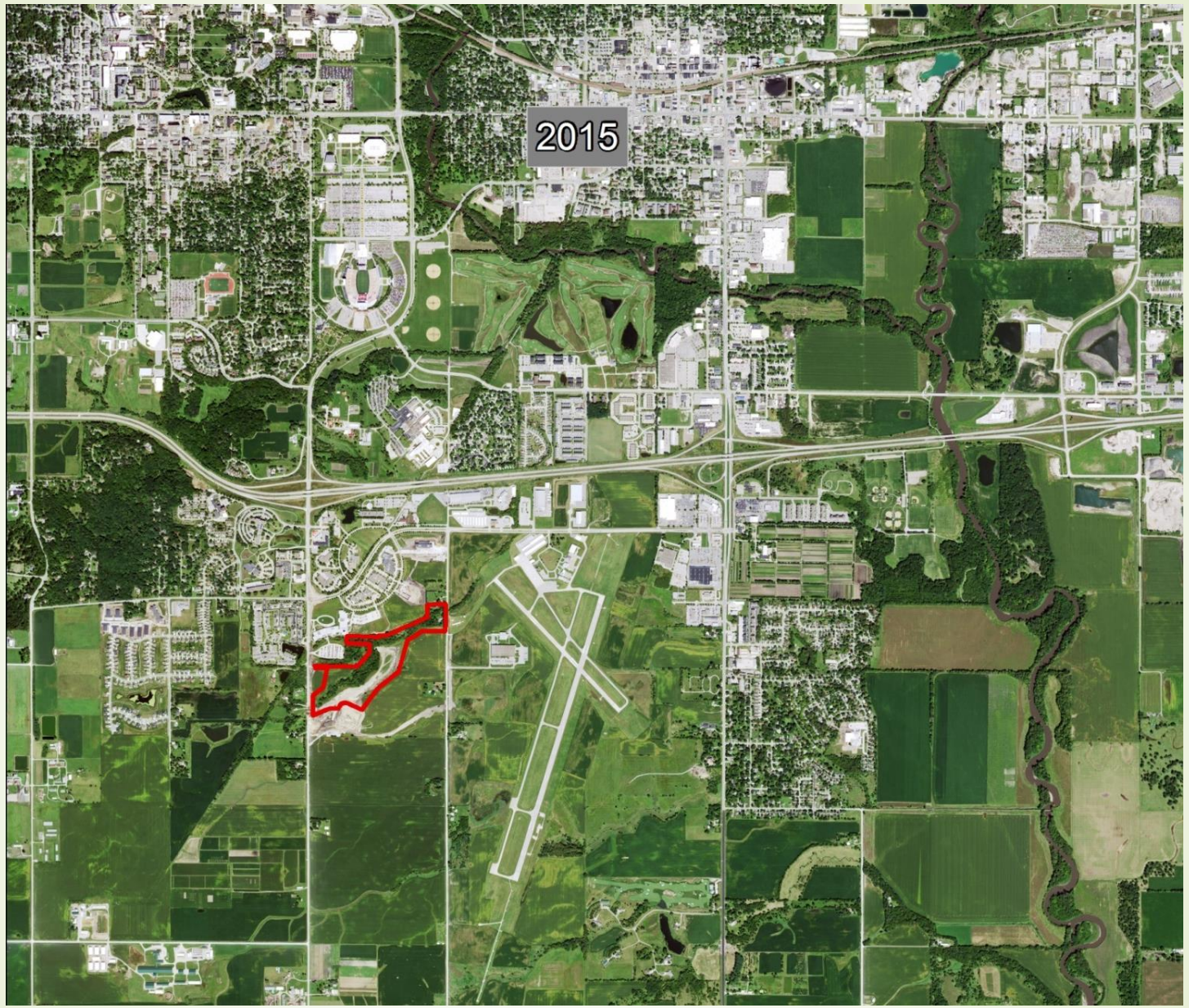

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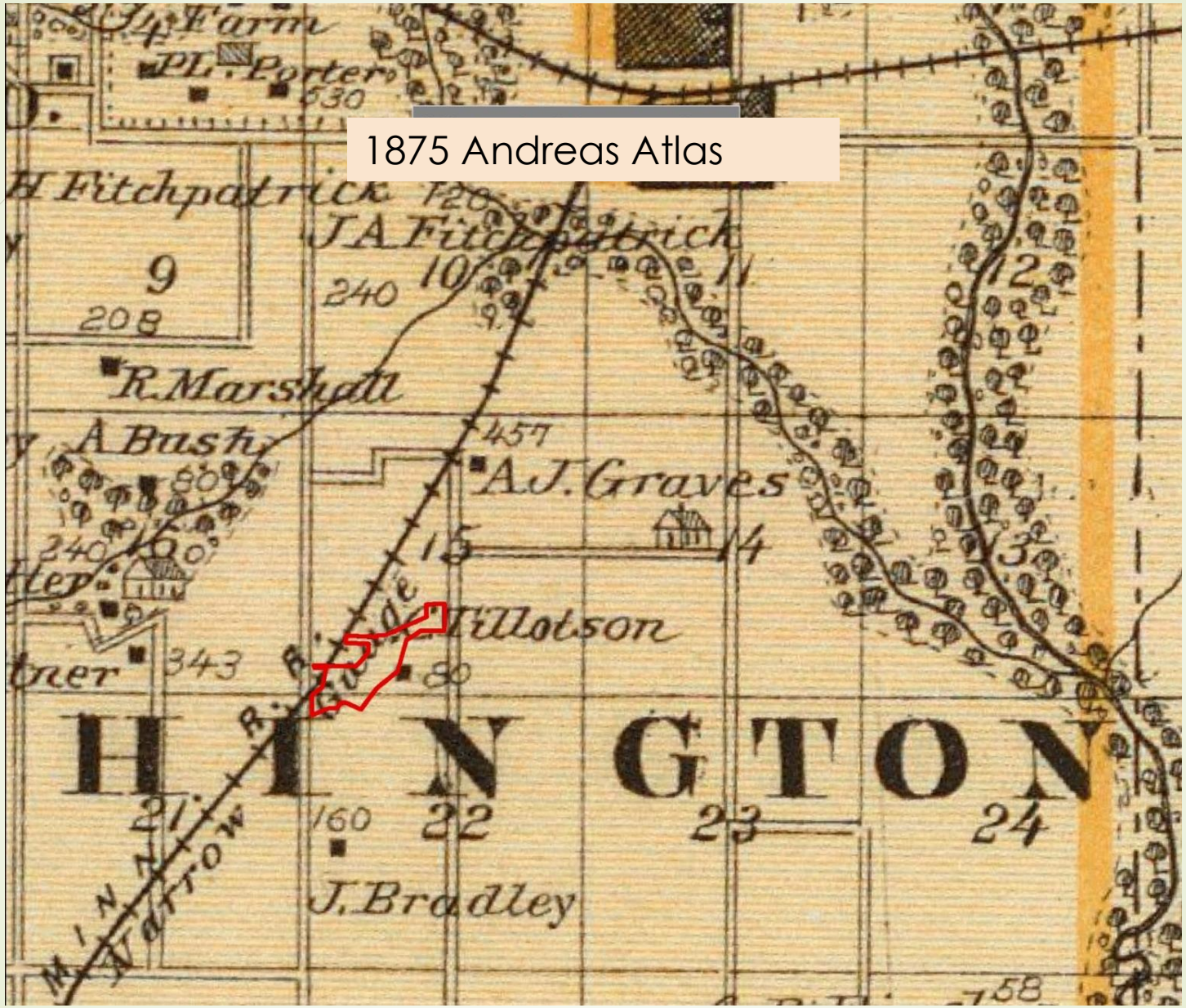
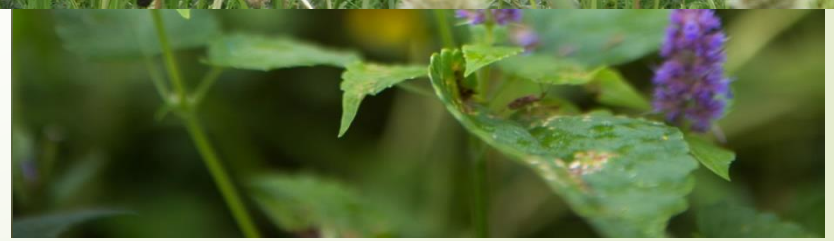


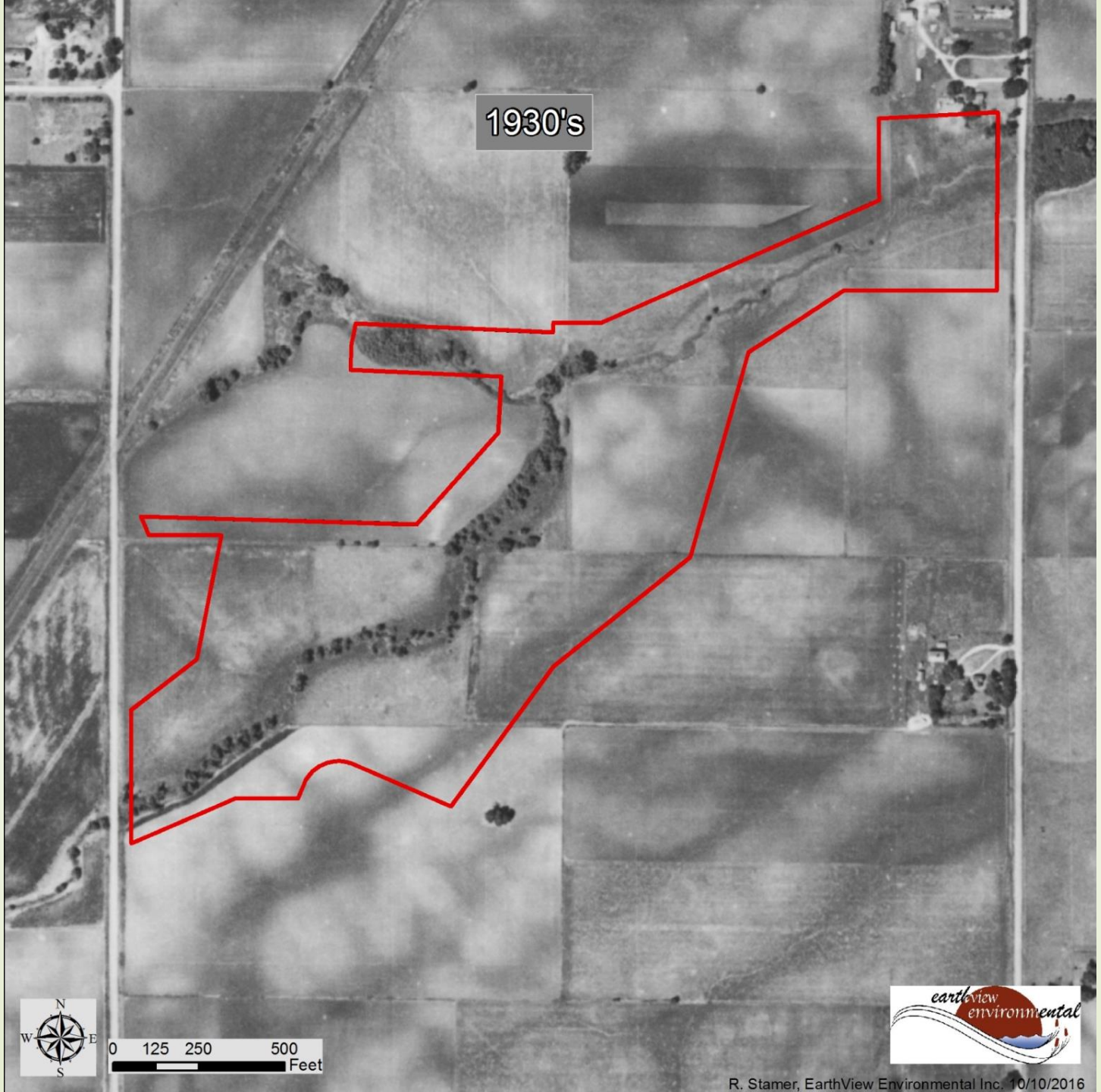
Historic & 2018 Vegetation

Mosaic of Wet Meadow and Upland Prairie

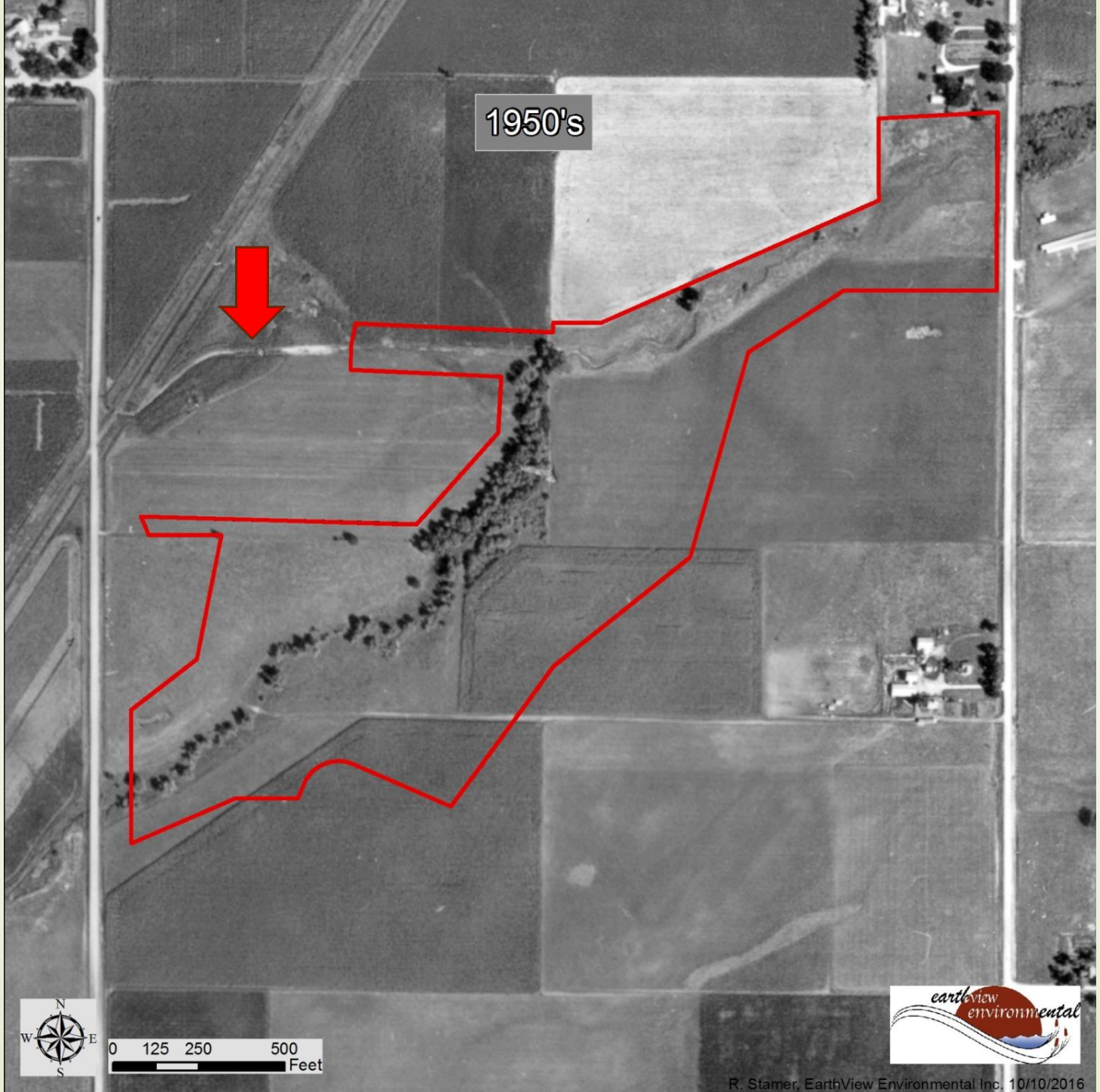


No Creek
No Trees

ARCHITECTURE+ENGINEERING



R. Stamer, EarthView Environmental Inc. 10/10/2016


1950's
N
W
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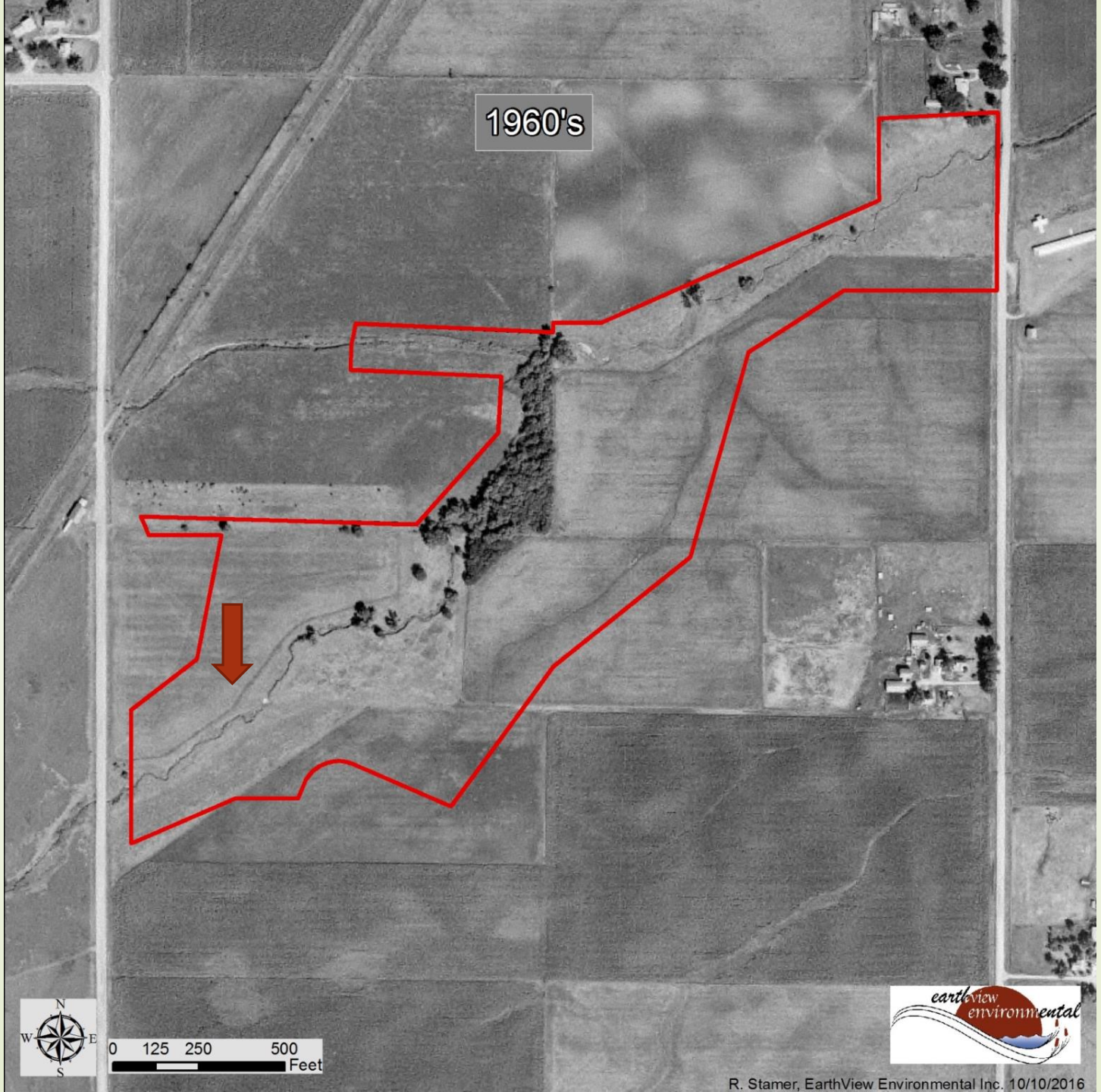
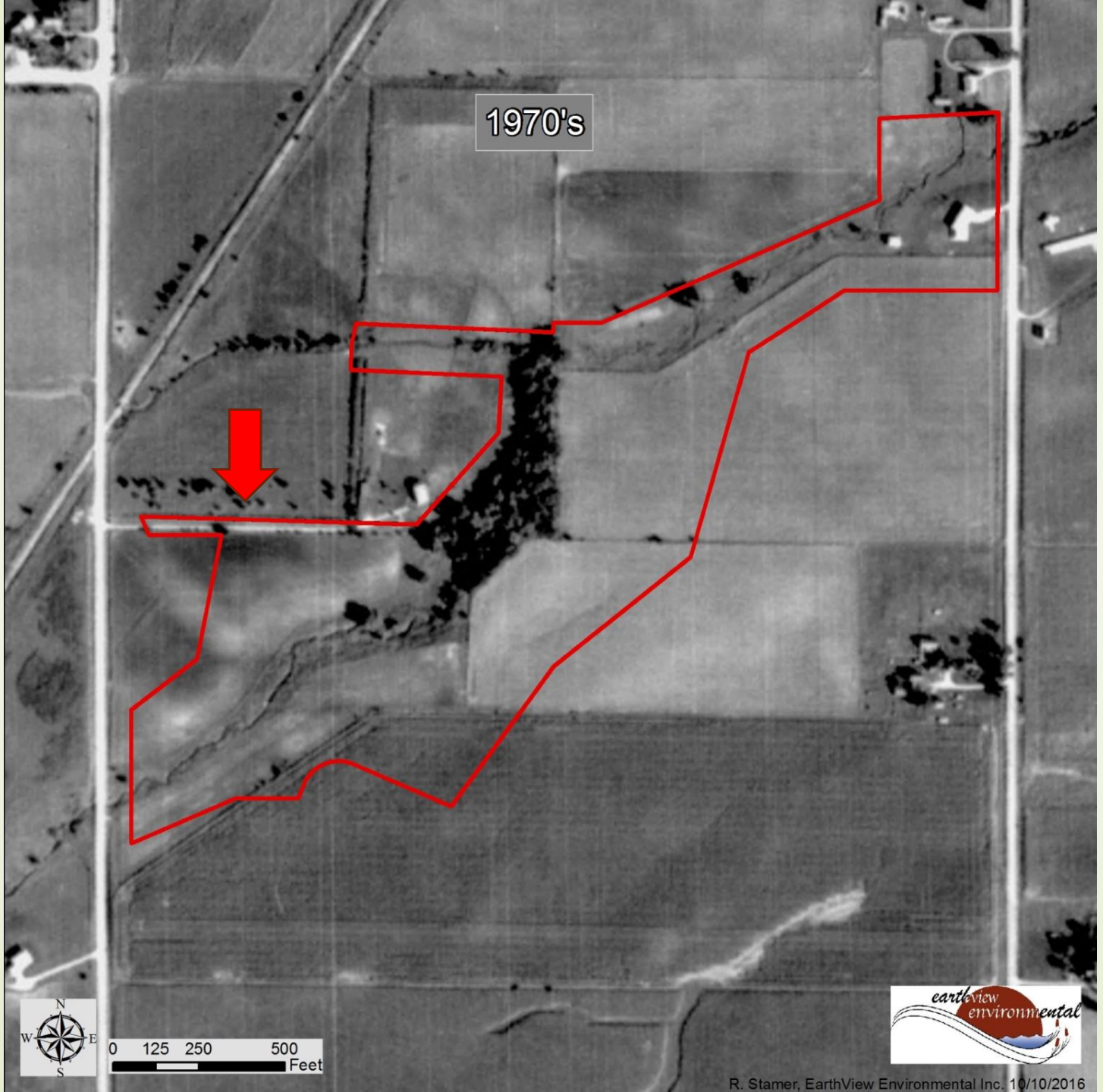
S
0 125 250 500
Feet
earthview environmental
R. Stamer, EarthView Environmental Inc. 10/10/2016



R. Stamer, EarthView Environmental Inc. 10/10/2016


1970's
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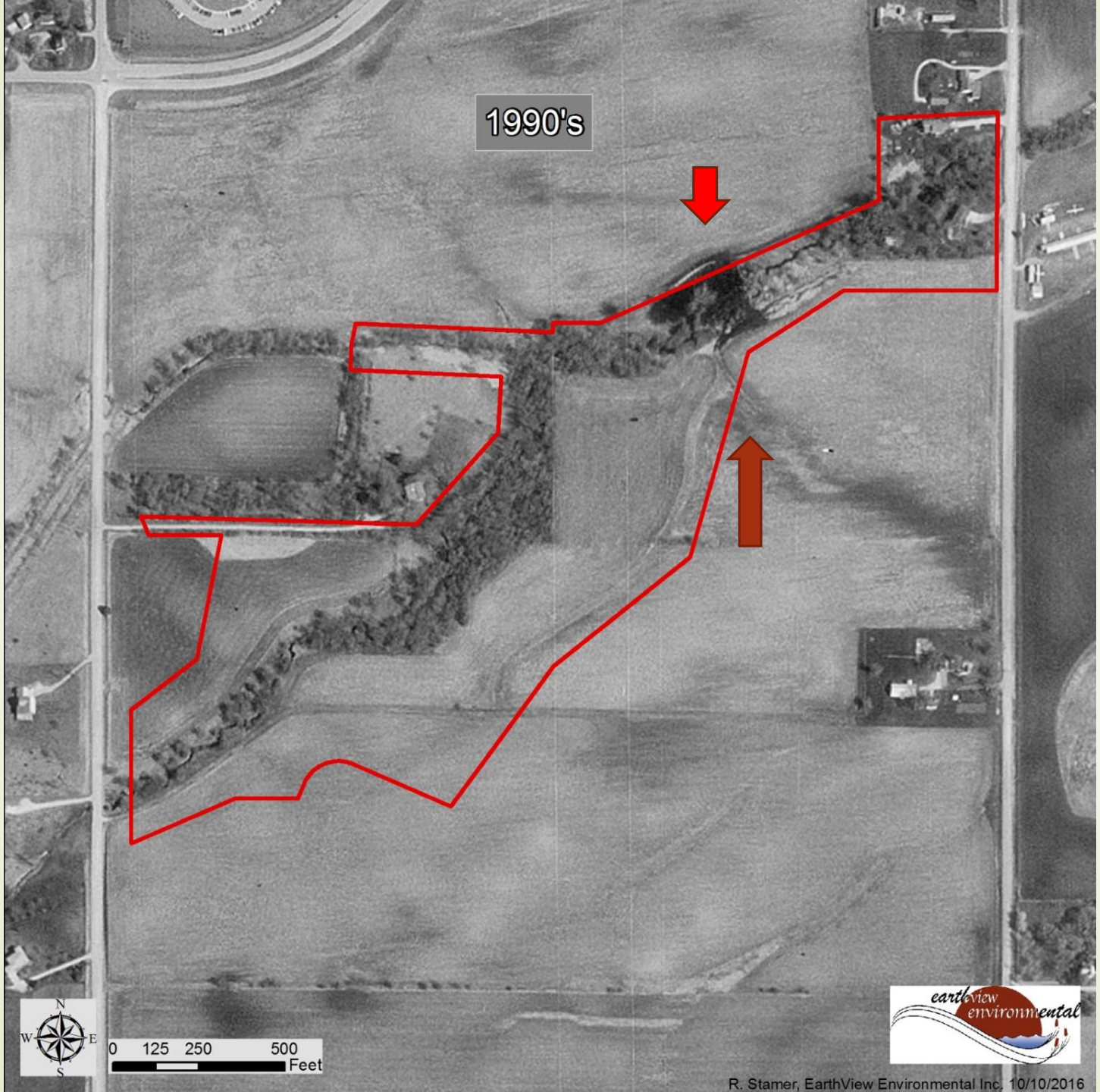
Feet
earthview environmental
R. Stamer, EarthView Environmental Inc. 10/10/2016


1990's
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R. Stamer, EarthView Environmental Inc. 10/10/2016


2002
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earthview environmental
R. Stamer, EarthView Environmental Inc. 10/10/2016


2006
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R. Stamer, EarthView Environmental Inc. 10/10/2016


2015
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Feet
earthview environmental
USDA, Iowa State University
R. Stamer, EarthView Environmental Inc. 10/10/2016


2016

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From Swale to Entrenched Stream

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From Swale to Entrenched Stream

Proposed Improvements

Andrew Dawson, WRT

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ISU RESEARCH PARK, AMES, IOWA

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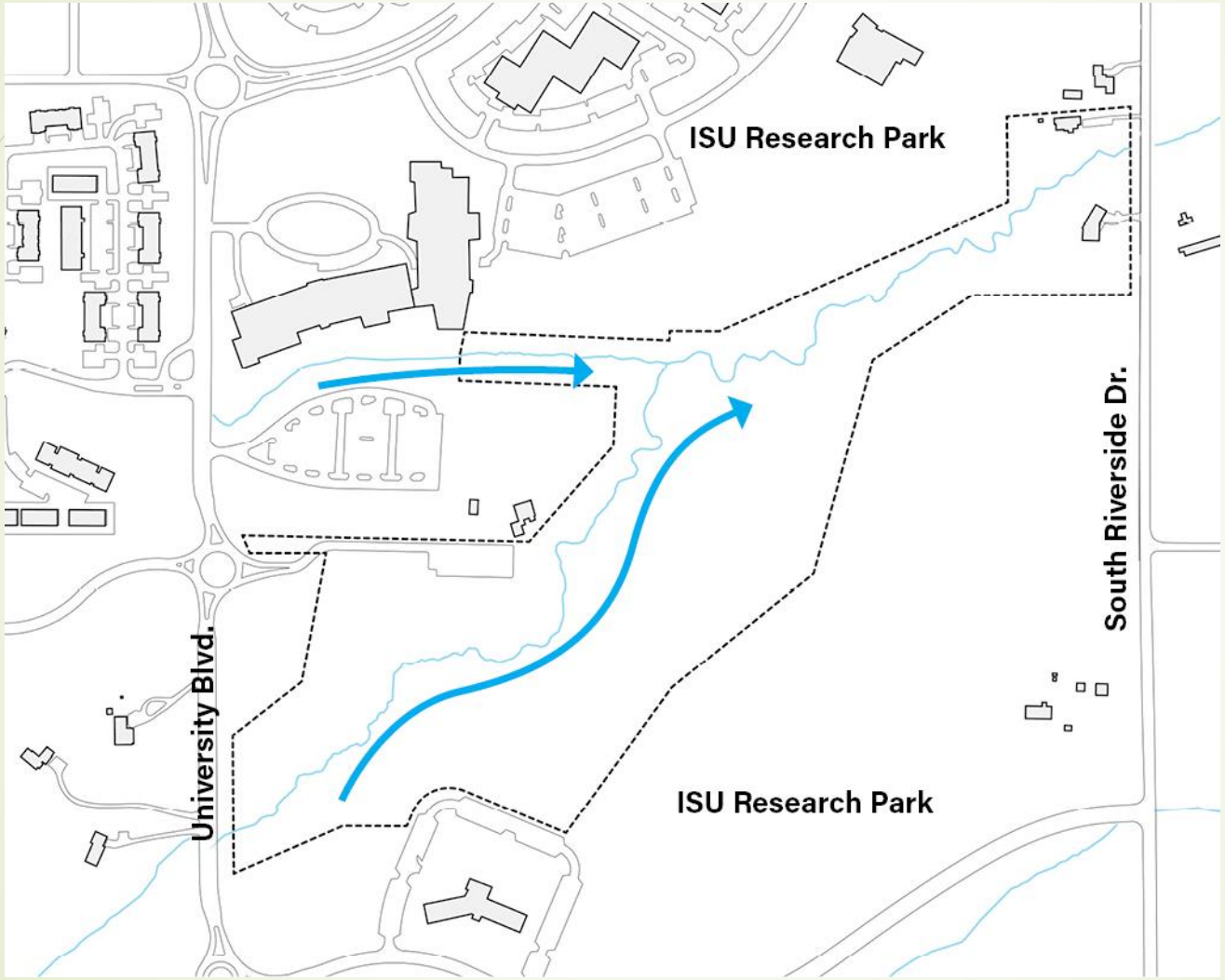
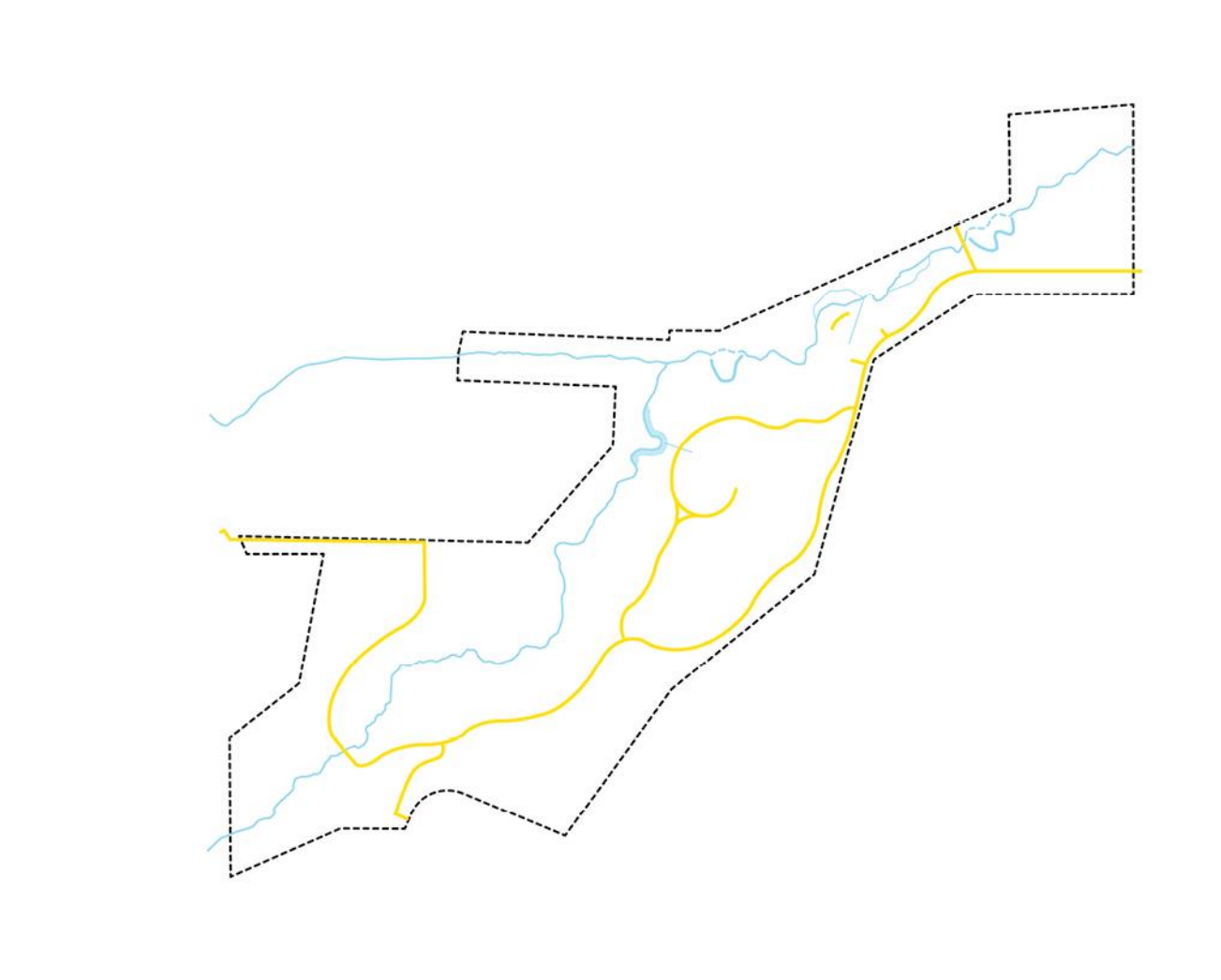
Stream Channel



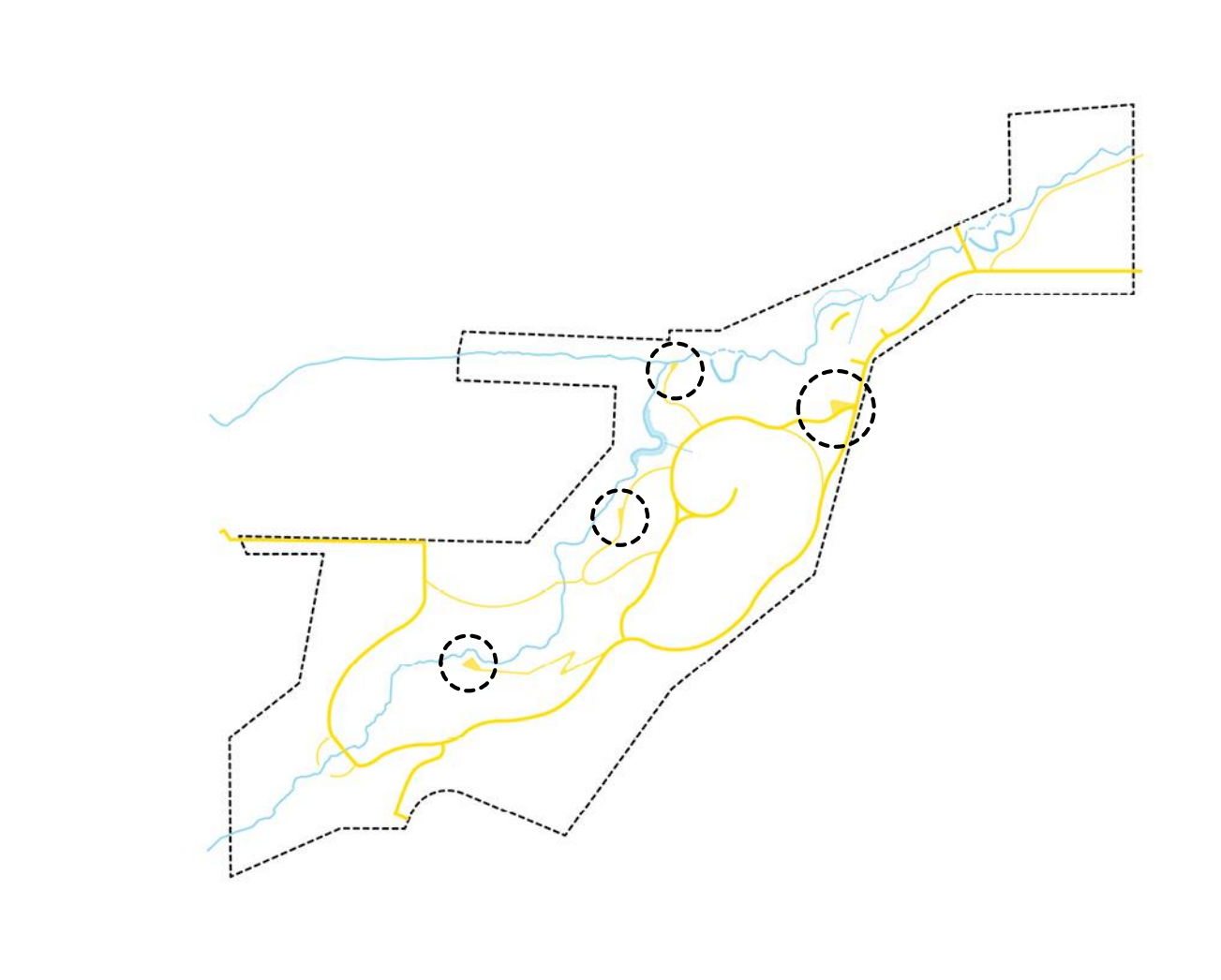
- The Corridor parcel aligns with two stream channels flowing northeast through the site
- Bounded by the ISU Research Park, University Blvd. and South Riverside Dr.

Circulation - Primary



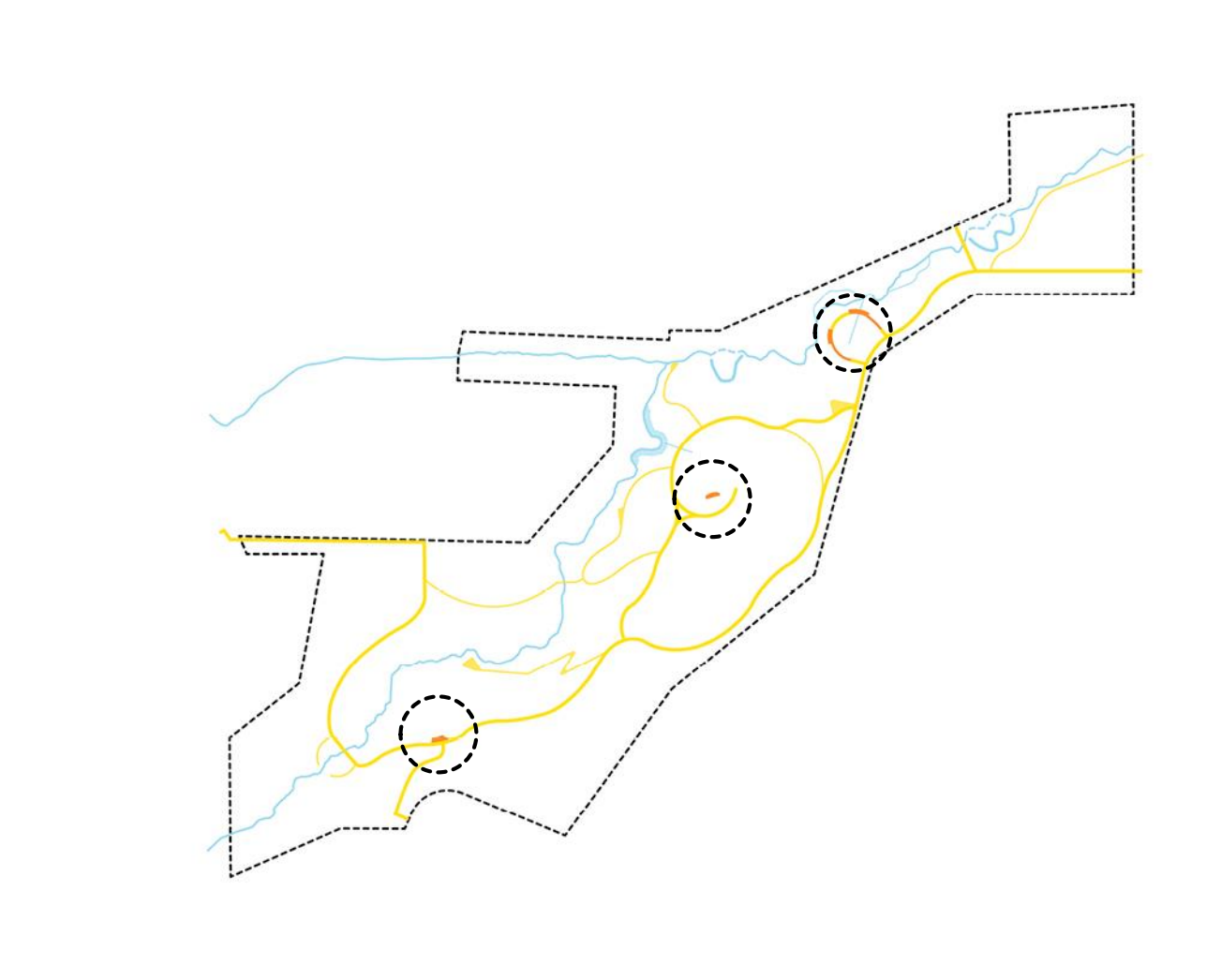
- Main pathways through the site are paved, 10' wide
- Provide connection east/west and north/south
- Enable visitors to reach most park amenities, but aim to facilitate movement

Circulation - Secondary



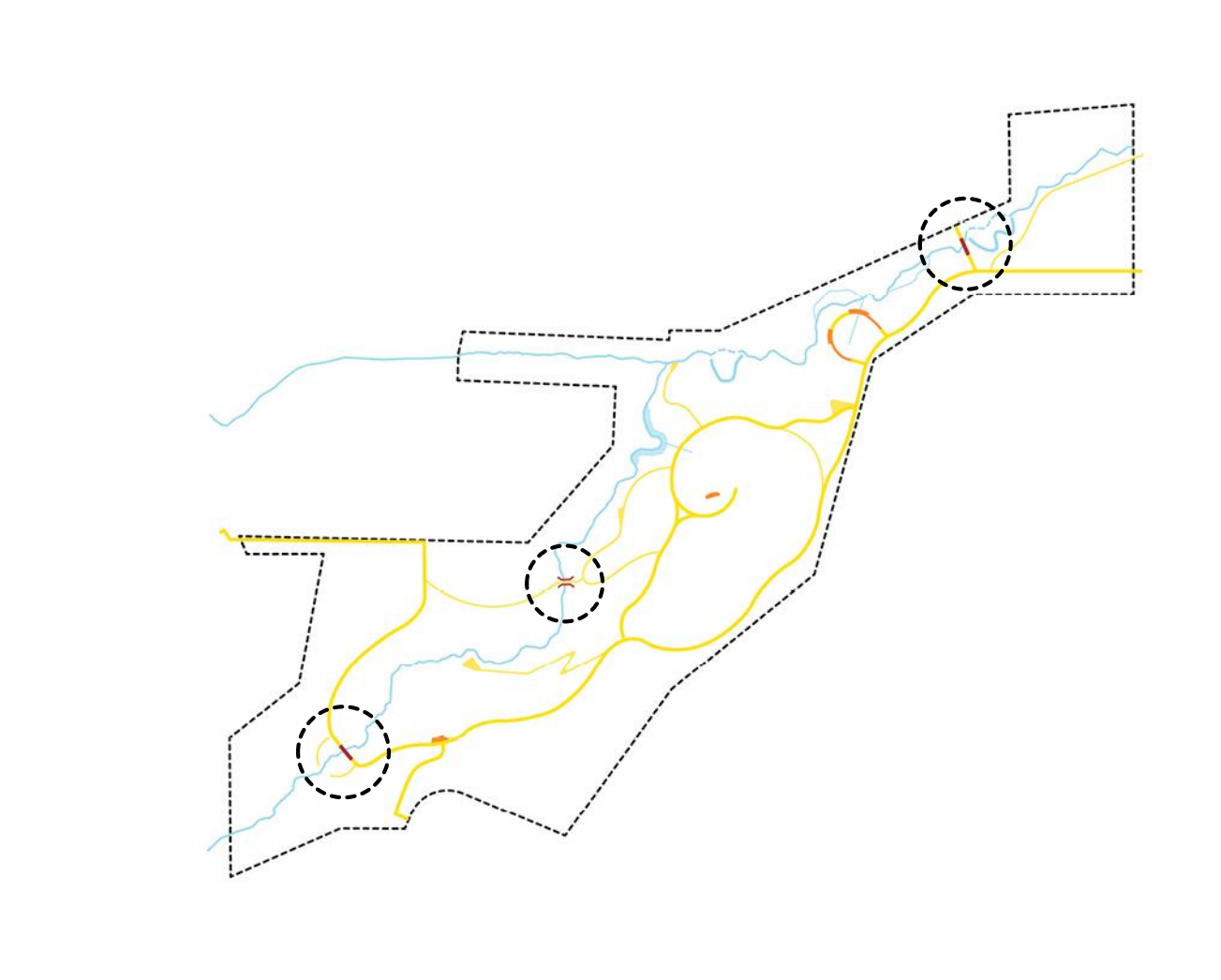
- Typically 5' wide, surfaced with mulch or other natural material
- Three small group gathering areas
- One large group gathering area

Circulation - Boardwalks



- Boardwalks highlight special features
- Wetlands
- Pond Pier
- Welcome Overlook
- Width varies

Circulation - Bridges



- Two 50’ pre-fab bridges span the creek at either end of the park
- The Ford is a third crossing, constructed with stepping-stones just above water level

Circulation – The Ford

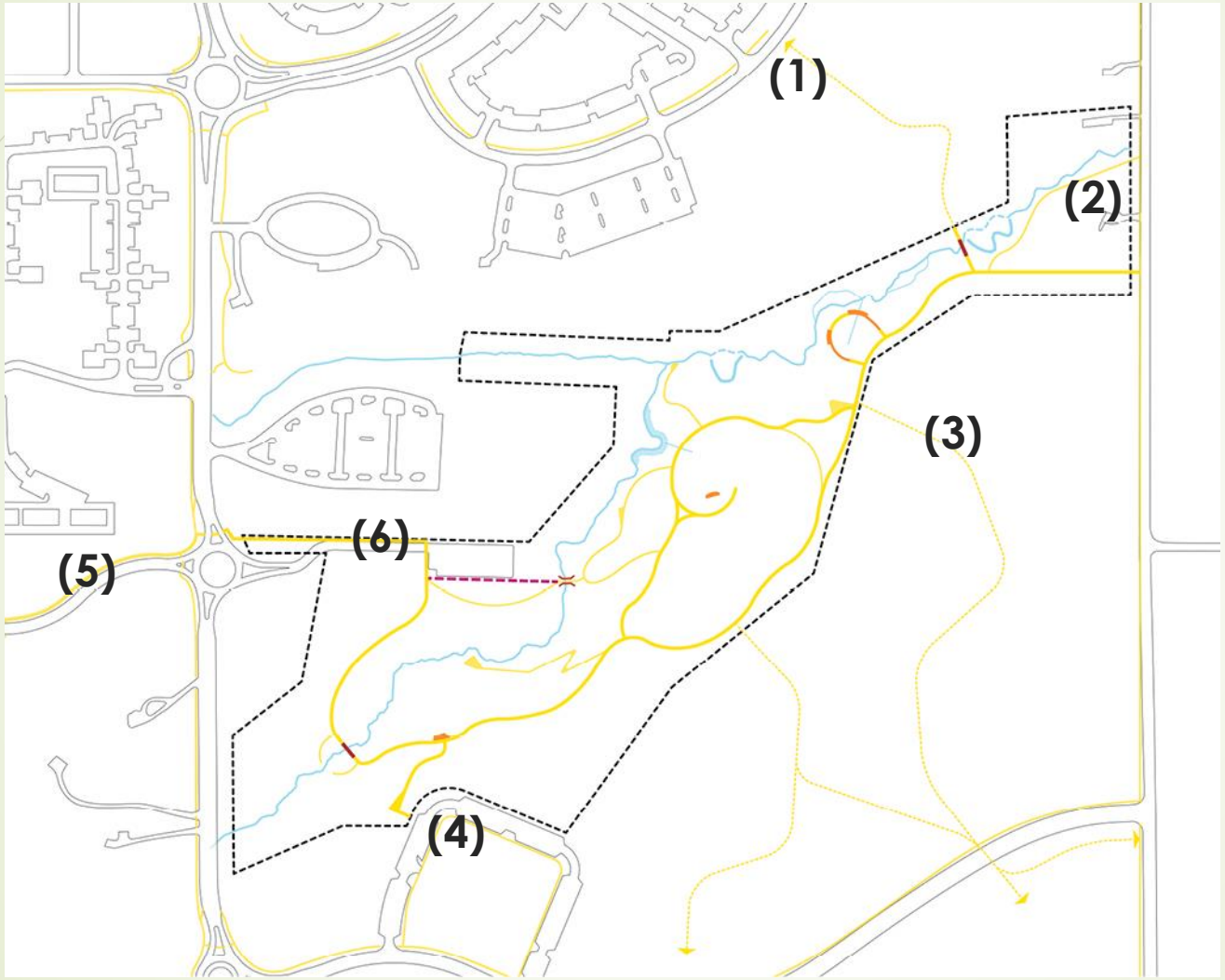
Circulation - Future

- The future West entrance road and parking lot could be enhanced with a primary trail and stair down to the Ford

Circulation – Regional Connections

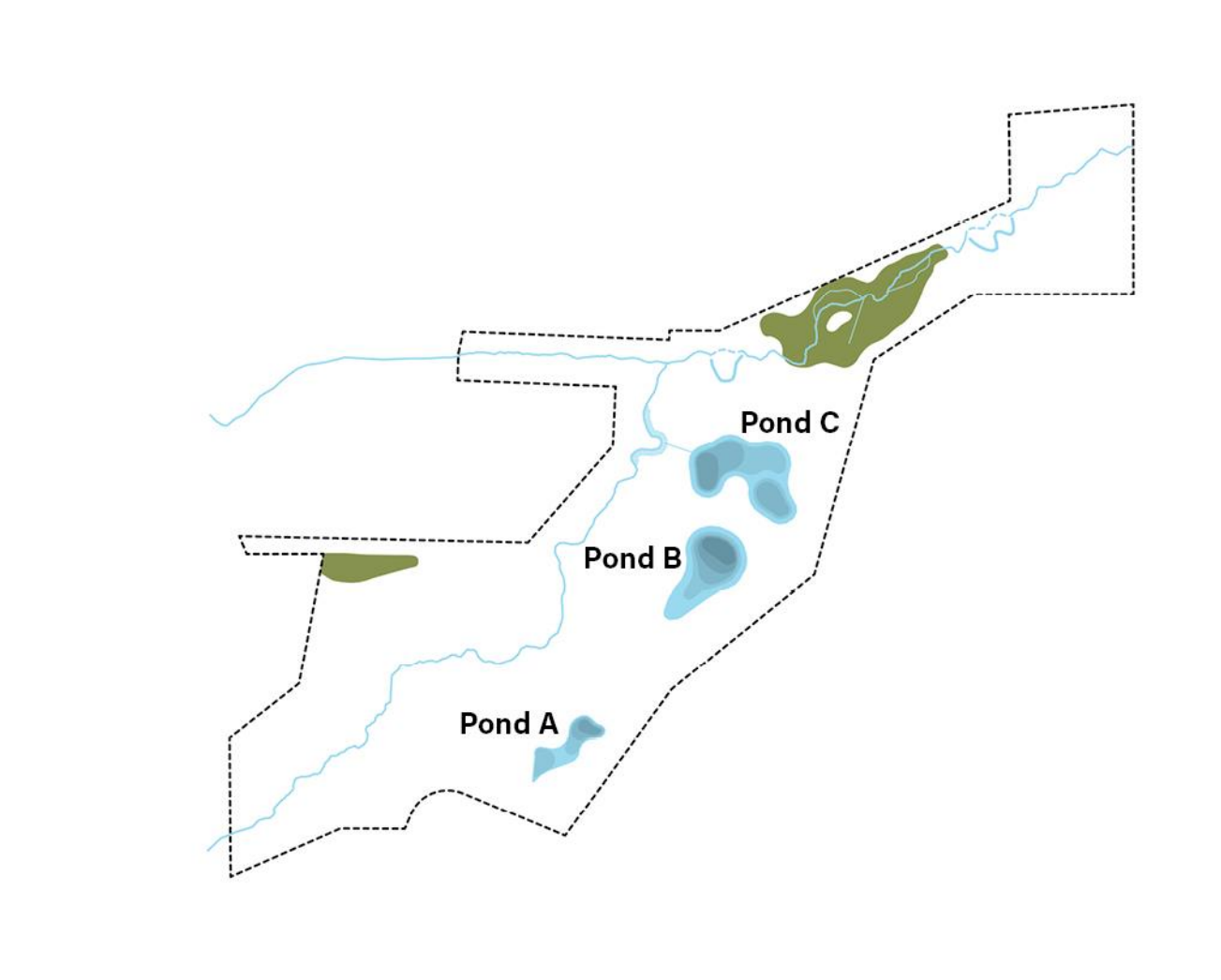
- Connections are established to join the TELC with the existing and planned regional trail network
- Outside the TELC, new trails can weave their way through future ISURP development

Circulation – Access



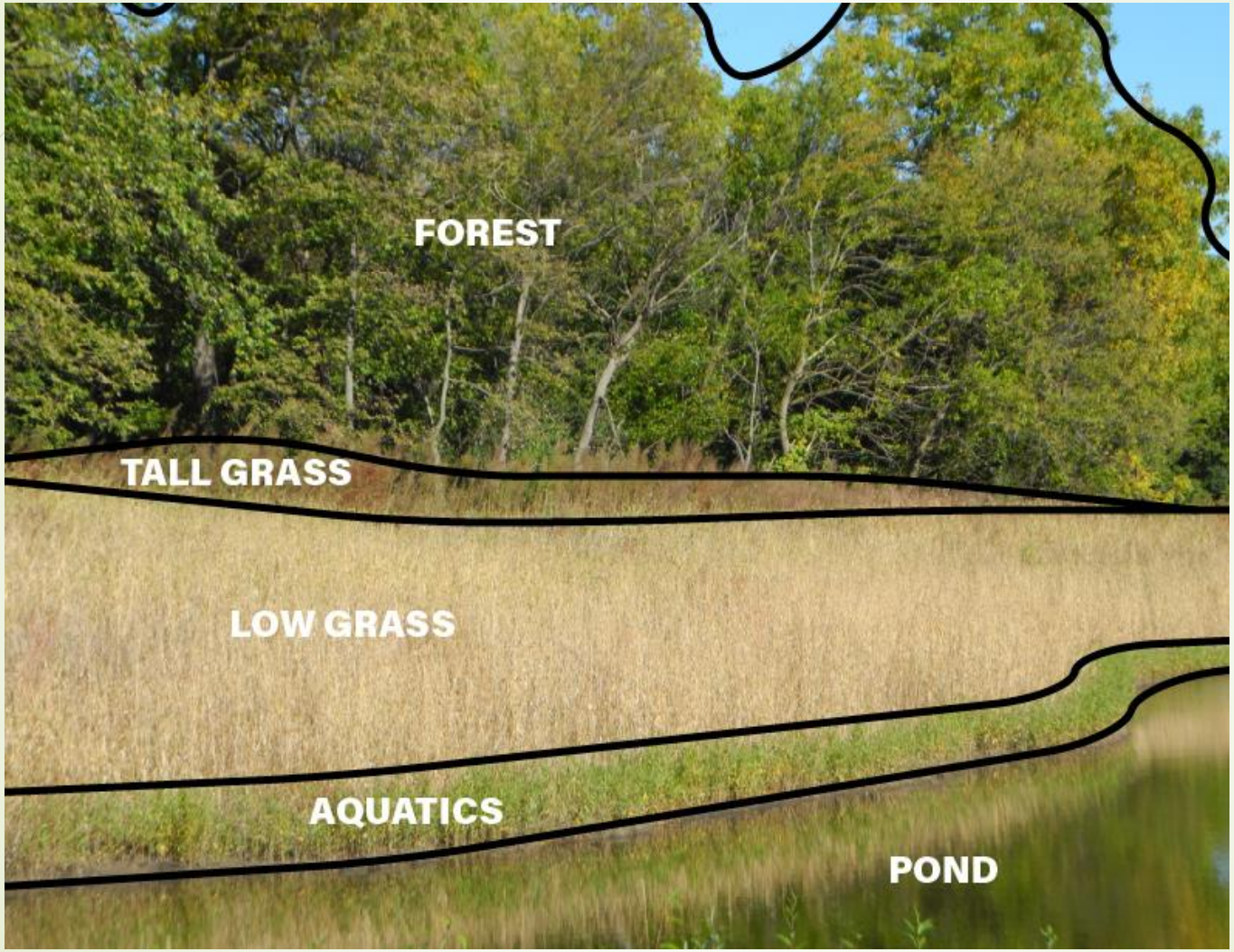
- (1) North Access Drop-off
- (2) East Access trail connection to S. Riverside Dr. planned bike route
- (3) Future Access by trail to new ISURP development
- (4) South Access and parking at ISURP's Collaboration Place
- (5) Trail connection to R38
- (6) Future vehicular access from University Blvd. with potential to accommodate buses

Vegetation – Wetlands / Ponds

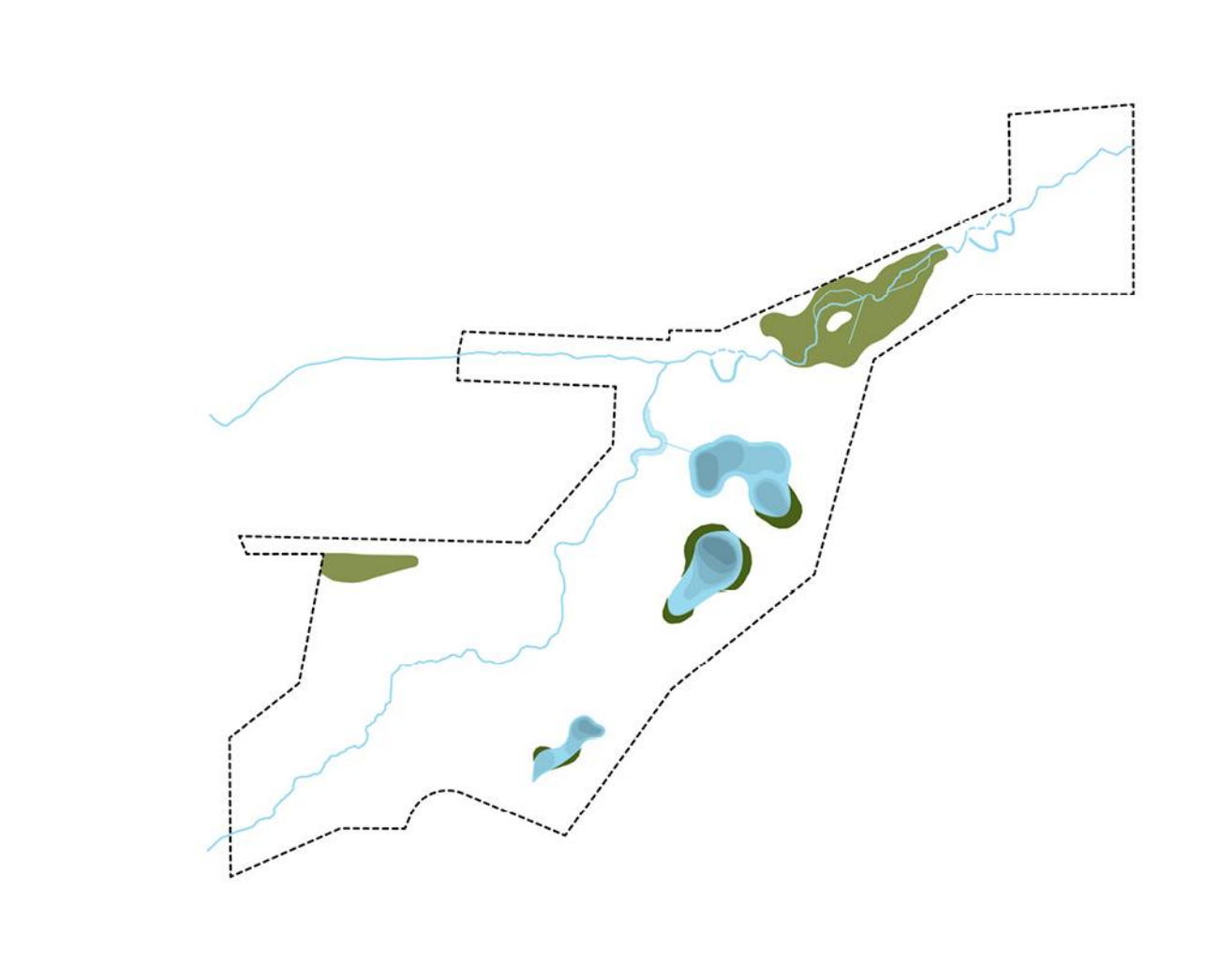


- Two wetland zones, about 5 acres
- Three stormwater ponds (A,B,C) totaling about 3 acres, with fluctuating water levels

Vegetation – Layers

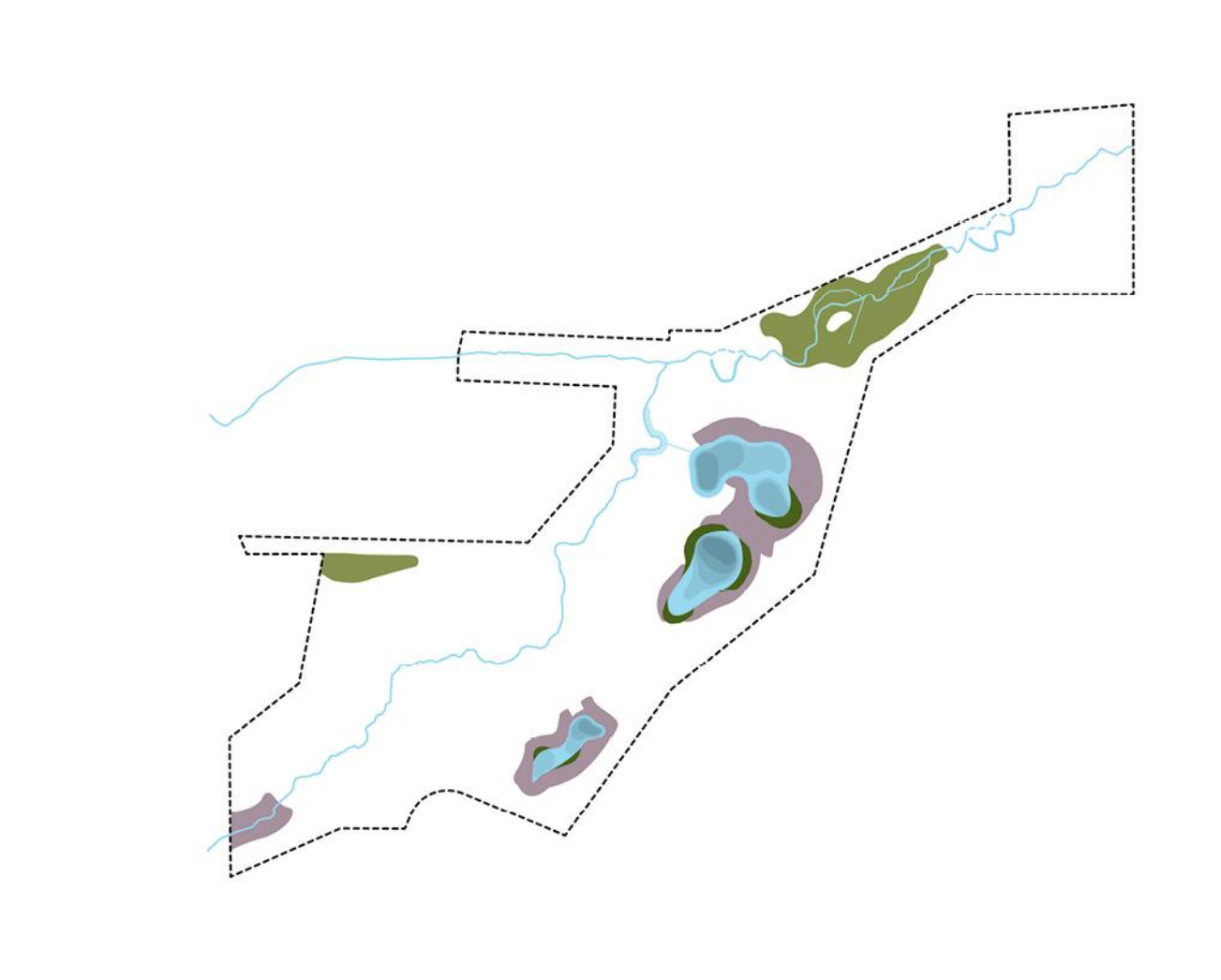


Vegetation – Aquatics



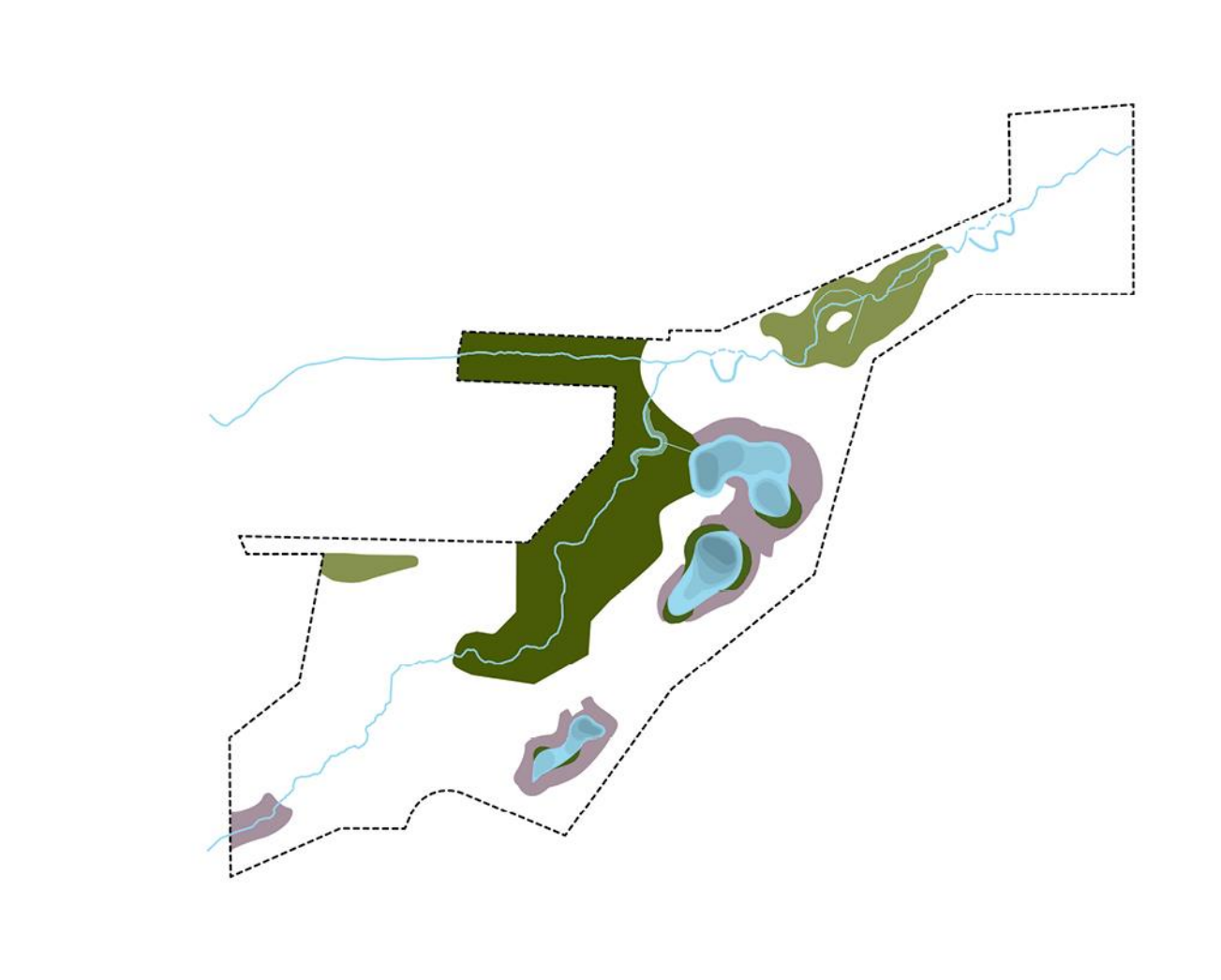
- Emergent planting at the water's edge that can tolerate wet or dry conditions

Vegetation – Riparian



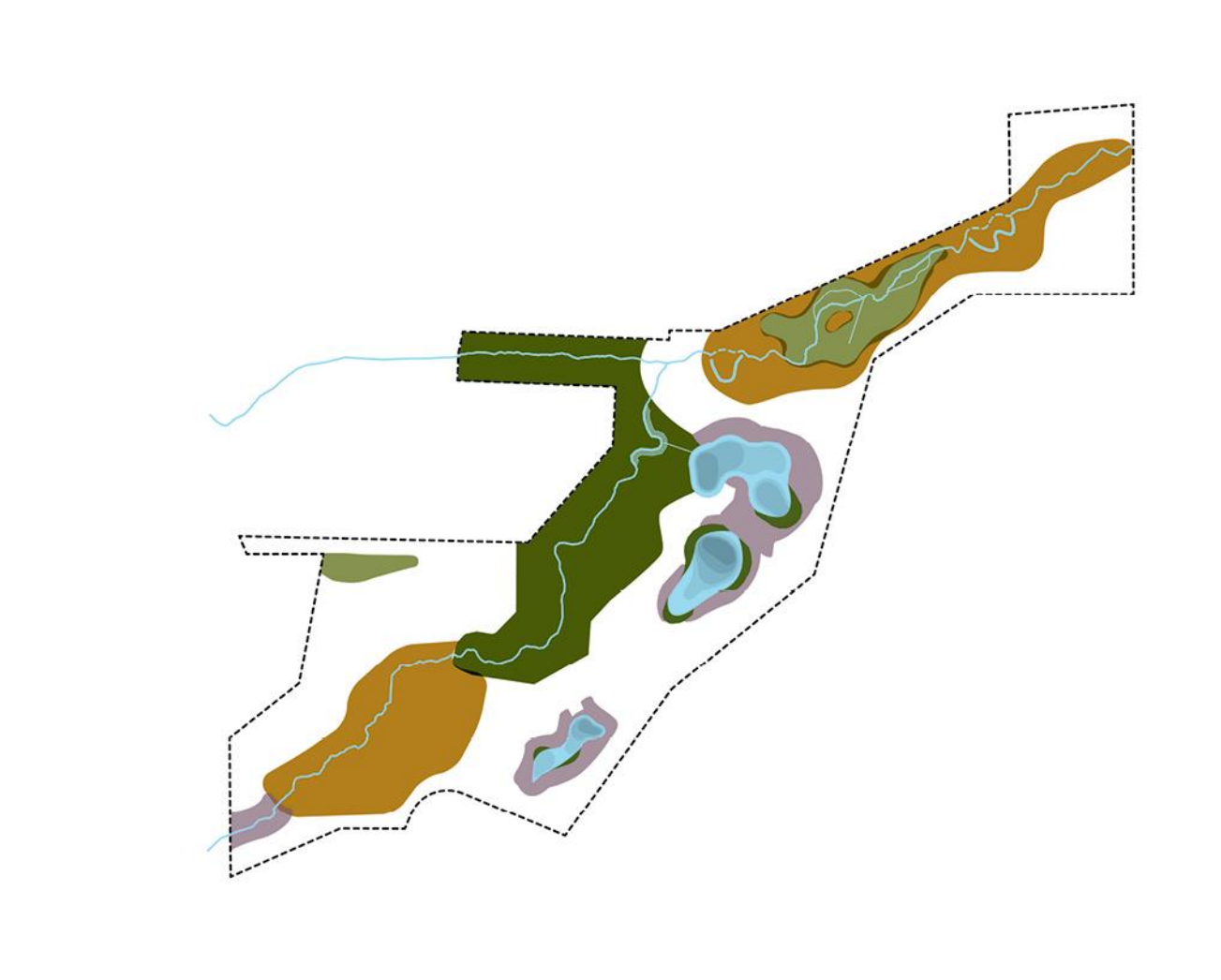
- Bordering the ponds, a layer of transitional planting
- Prefers moist conditions
- Provides habitat and aids in erosion prevention

Vegetation – Forest



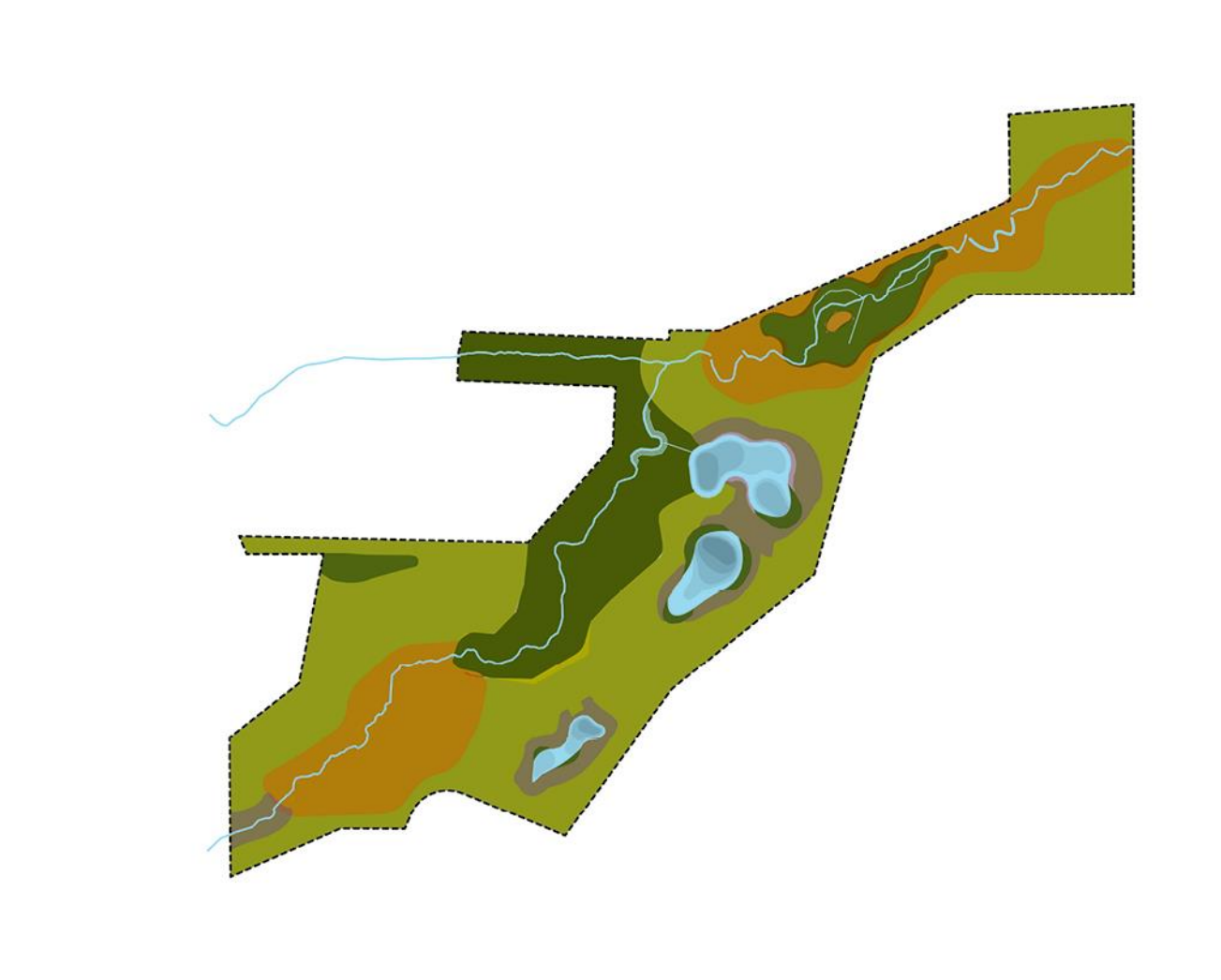
- Existing old growth forest remains
- Large Black Walnuts provide unique habitat and visitor experience
- Needs understory and invasive species cleanup

Vegetation – Savanna



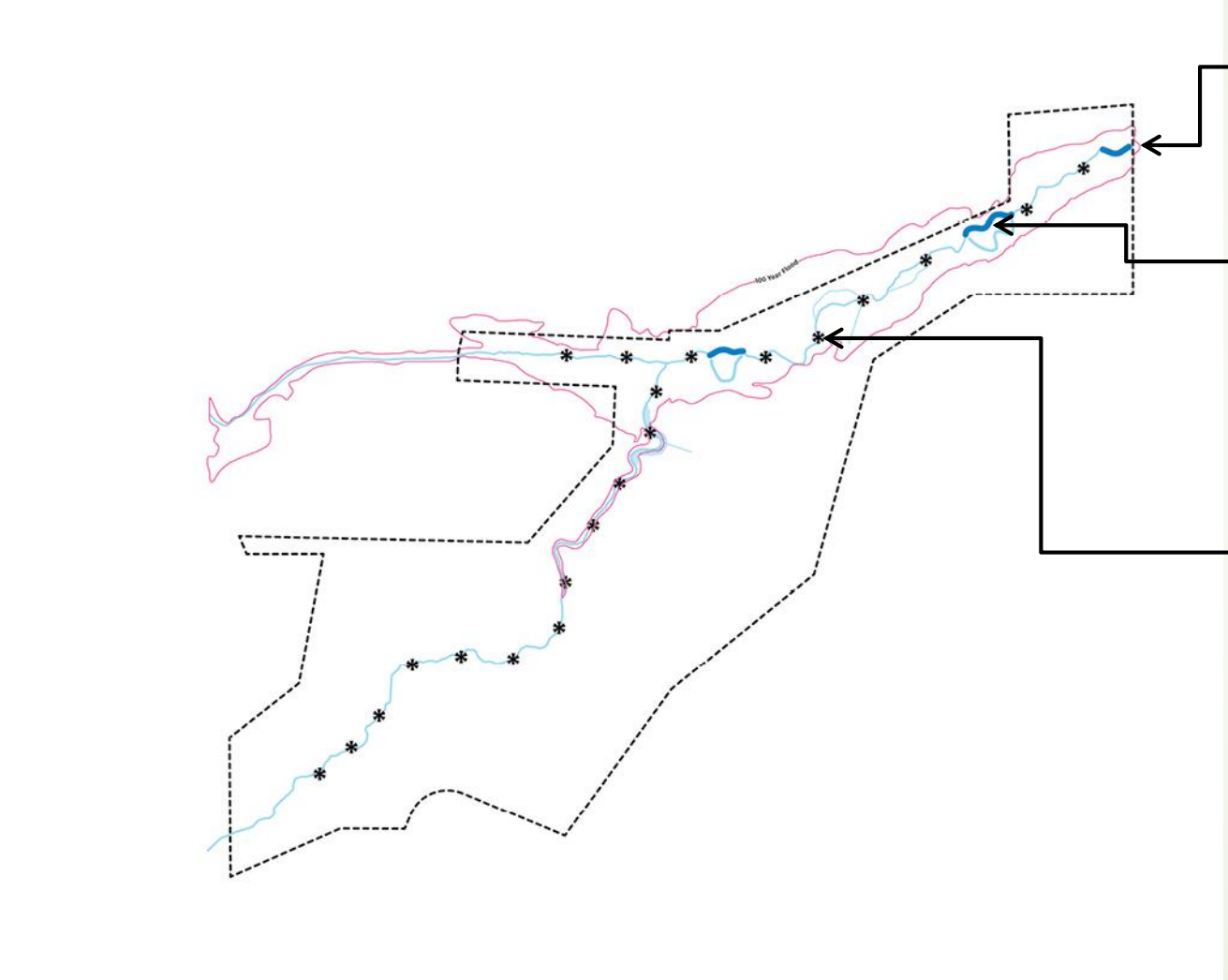
- Savanna zones contain tall grasses and sparse trees, and are found near the stream corridor

Vegetation – Prairie



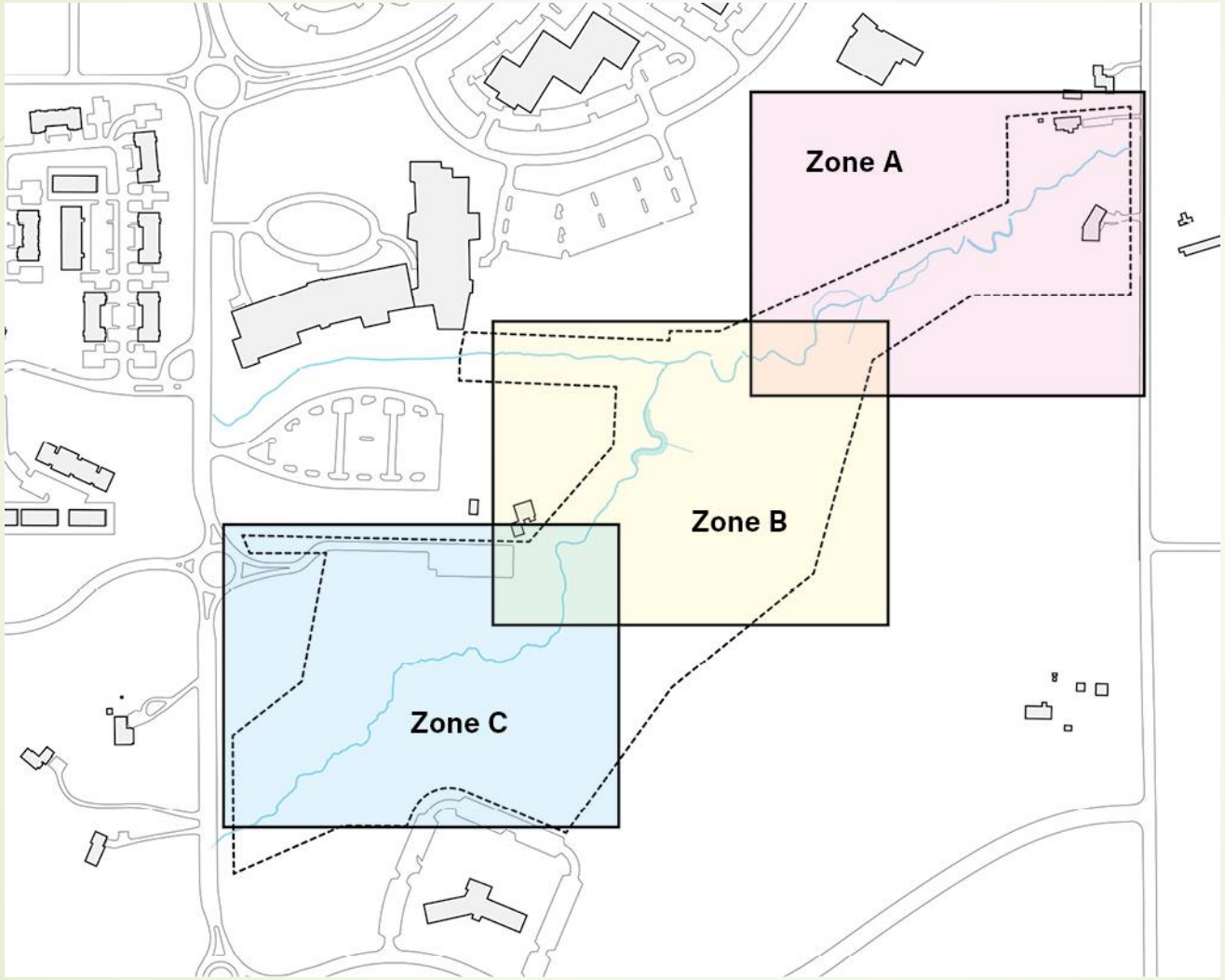
- Upland prairie is intended to be the dominant landscape feature of the TELC

Water Features

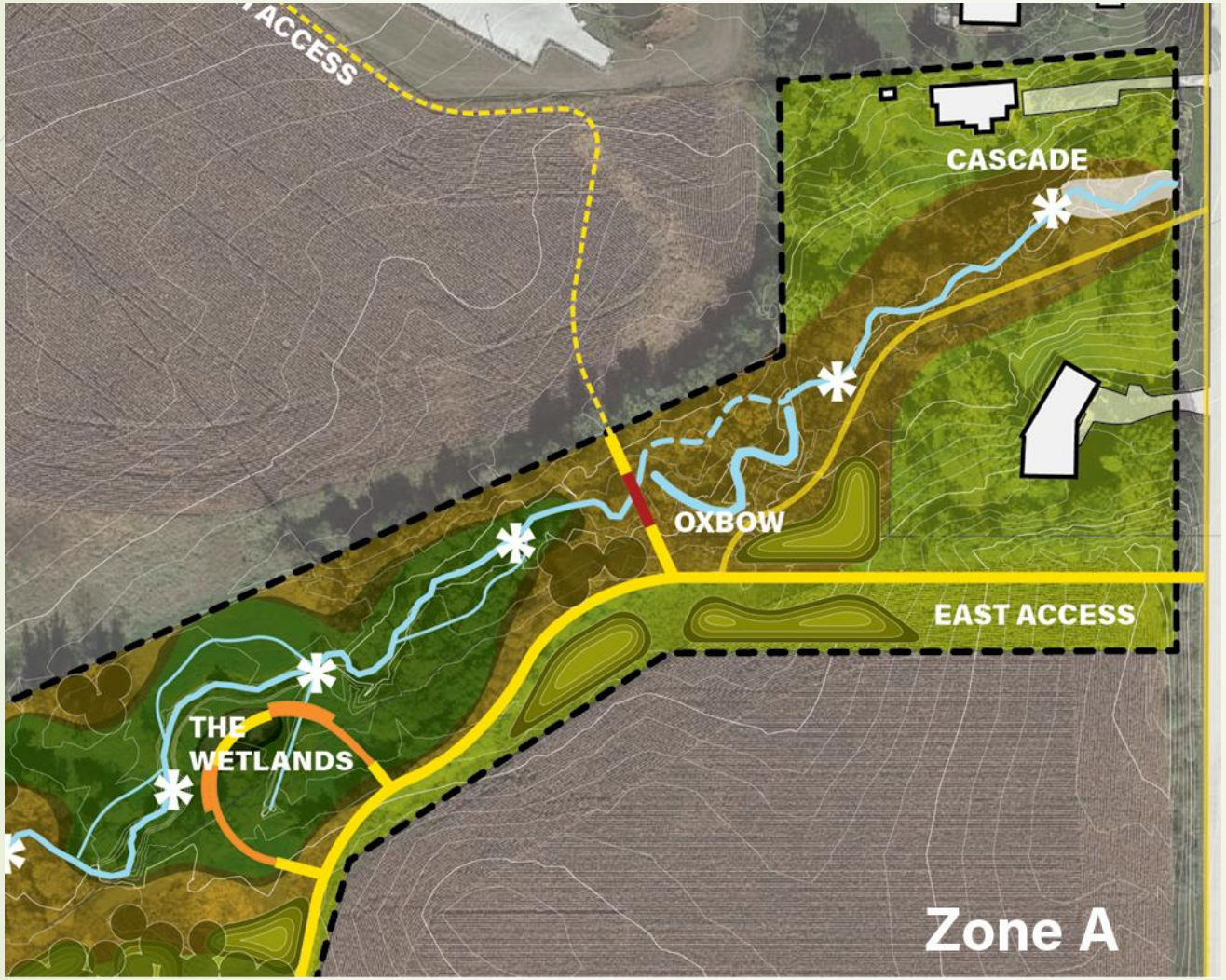


- Roughened channel creates a small cascade viewable from S. Riverside trail
- Oxbow creation increases habitat potential as a byproduct of reconfiguring the stream channel
- 21 riffles spaced throughout the TELC, slow erosion and facilitate stream channel restoration

Program and Amenity

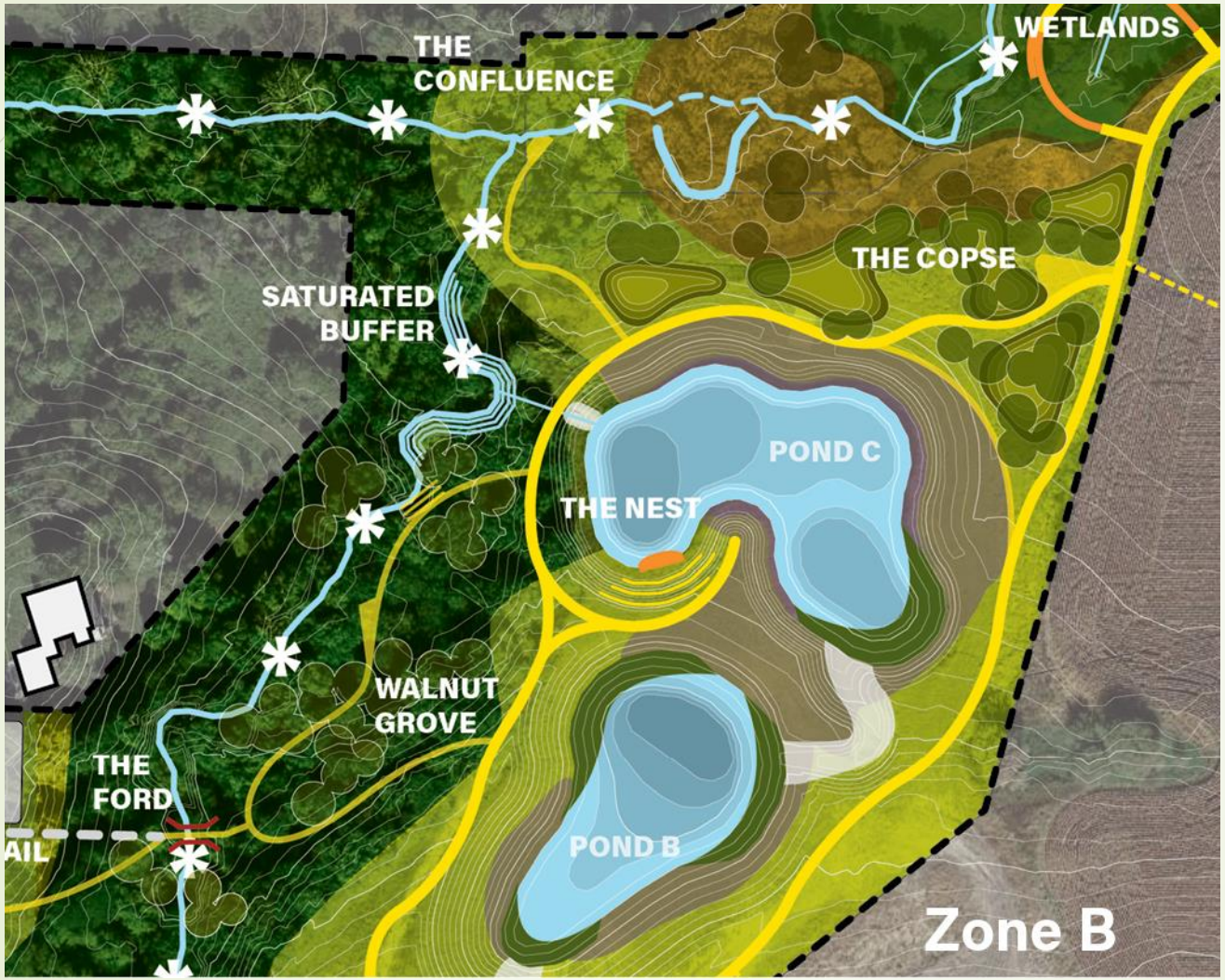


Program and Amenity – Zone A



- Trail connections
- Cascade
- Bridge
- Oxbow
- Mounds (reusing fill)
- Wetlands and boardwalks

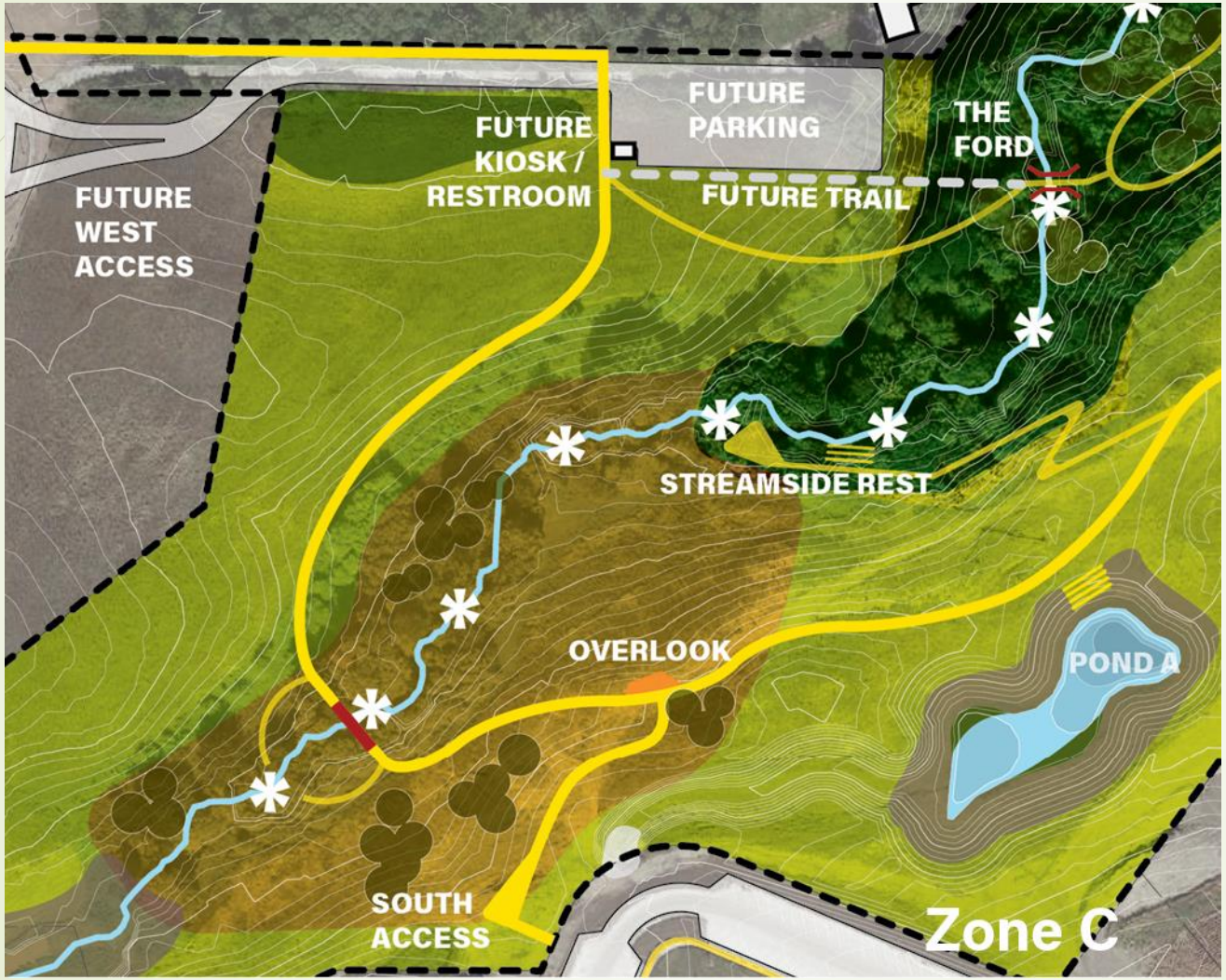
Program and Amenity – Zone B



- Trail alignments – primary/secondary
- The Copse
- The Confluence
- Saturated Buffer at Pond C outfall
- The Nest
- Walnut Grove
- The Ford
- Stone steps / seatwalls

Program and Amenity – The Nest

Program and Amenity – Zone C



- Future access, kiosk, restrooms
- Streamside Rest
- Stone steps / seatwalls
- Overlook
- Bridge / Riffles
- South Access Plaza

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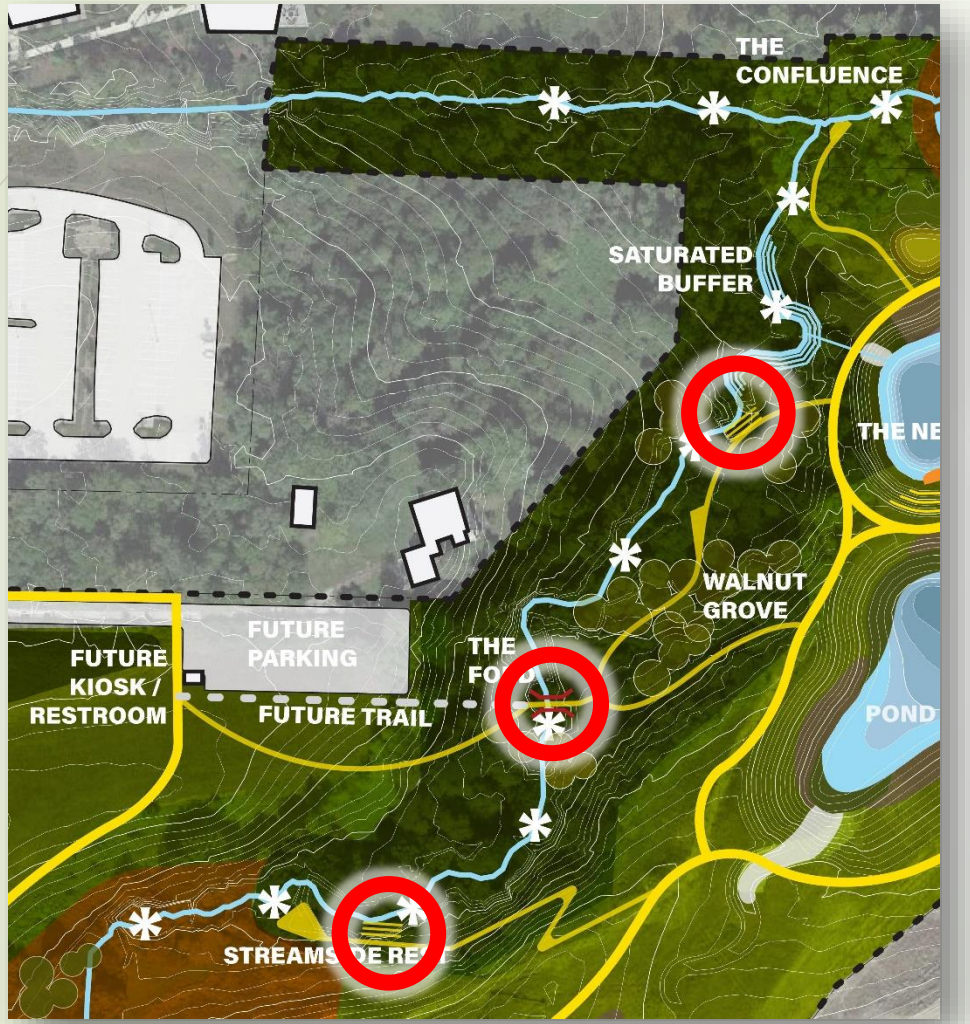
Interpretive Aspects

Jean Eells, E Resources

Interpretive Aspects

Interpretive Aspects



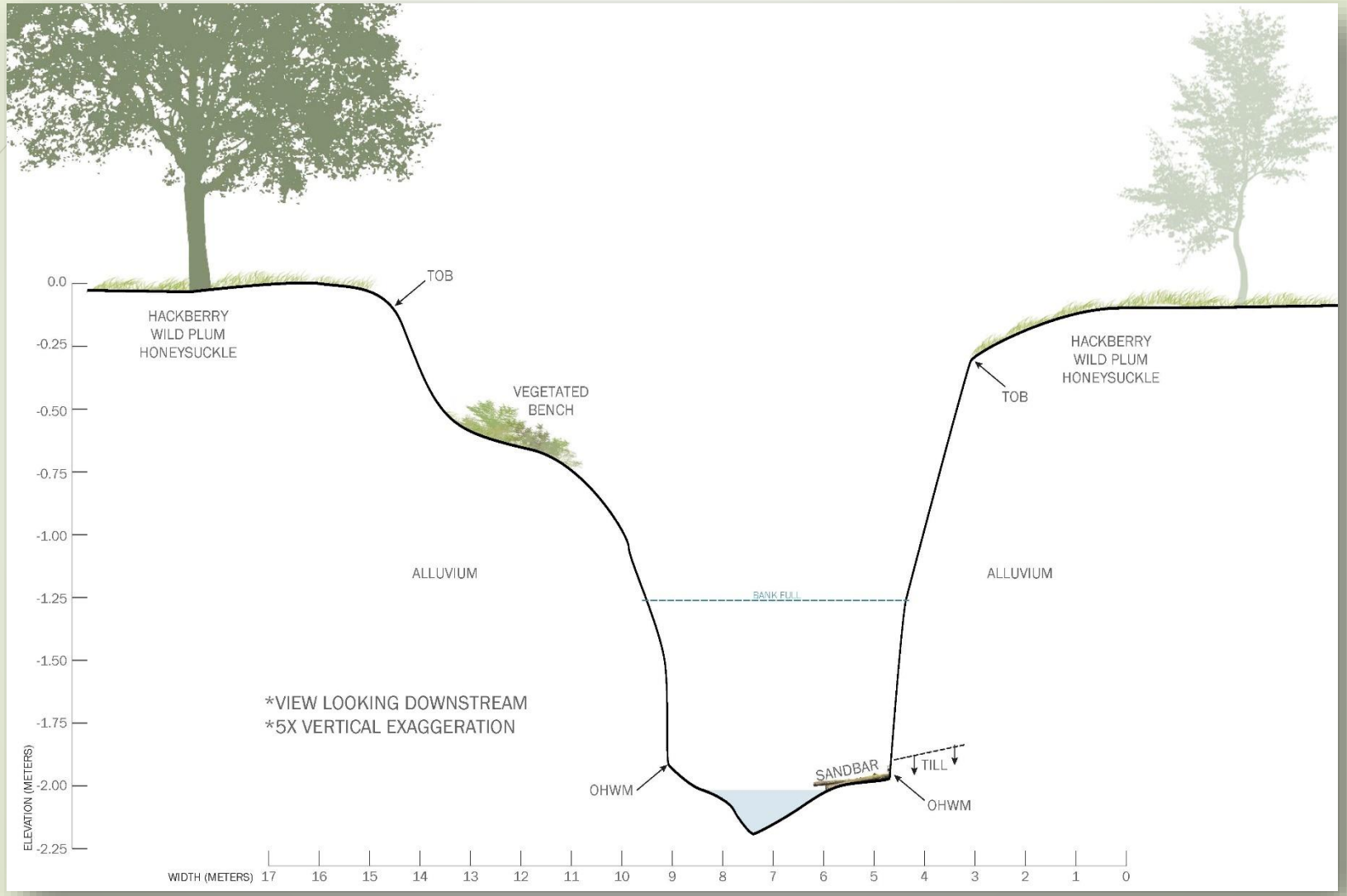
Stream Restoration

Luke Monat, Shive-Hattery

Current Stream Condition

- Incised channel
- Disconnected from floodplain
- Simplified channel

Current Stream Condition



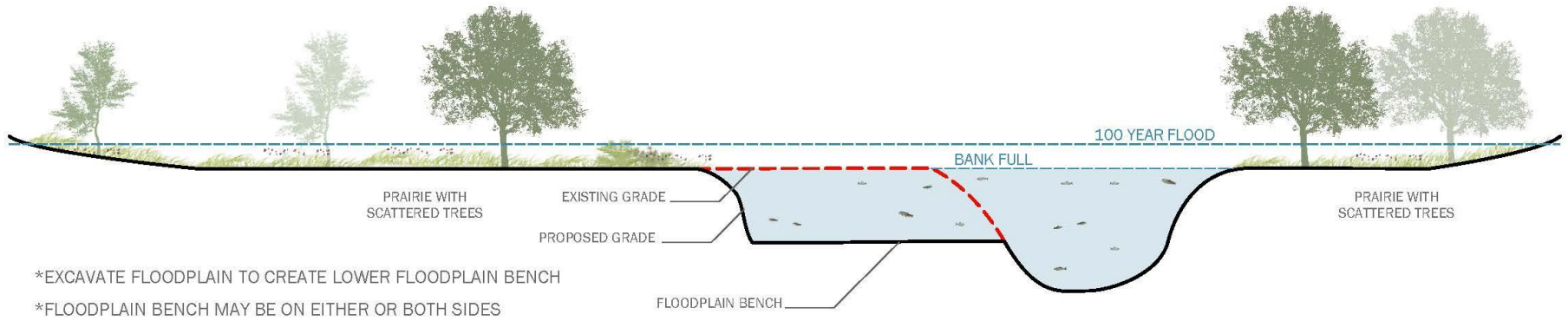
Restoration Goals

- Floodplain reconnection
  - Raise streambed
  - Lower floodplain
- Channel stabilization
  - Bioengineering bank stabilization practices
  - Rock riffle grade control
- Habitat enhancements
  - Remove invasive species
  - Re-establish native vegetation
  - Create oxbow wetland

Restoration Concepts

Restoration Concepts

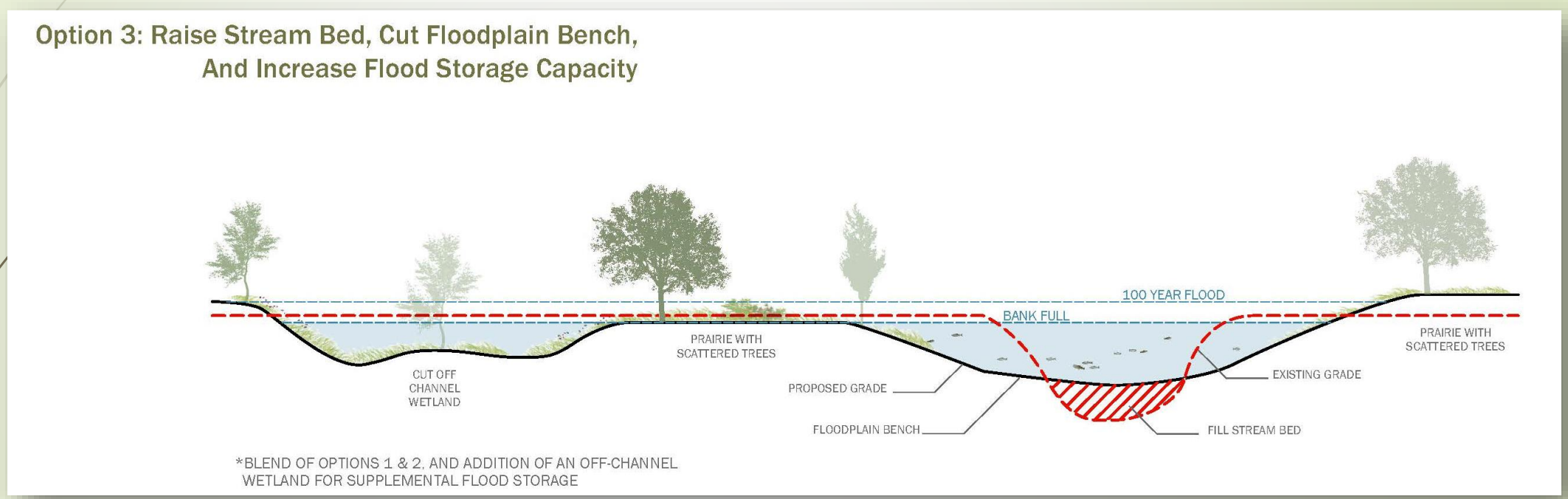
Option 2: Excavate Lower Floodplain Bench



*EXCAVATE FLOODPLAIN TO CREATE LOWER FLOODPLAIN BENCH

*FLOODPLAIN BENCH MAY BE ON EITHER OR BOTH SIDES

Restoration Concepts



Project Timeline

SUMMER 2017: Stream Restoration

SUMMER 2018: Trail Construction

SUMMER 2019: Park Amenities

- Anticipated Project cost of $4 million
- Phase 1 budget of $1.65 Million

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Questions?